REMARKS

Claims 1–4, 7–12, 14, 16–21, 23, and 25–33 are now pending in the application. Claims 7, 8, 12, 16–17, 28, and 30 have been amended. Applicant respectfully traverses and requests reconsideration.

Allowable Subject Matter

Applicant would like to thank the Examiner for notice that claims 1–4, 9–11, 25–27, and 33 are allowed. The Examiner states that claims 7–8 are objected to due to as relying on a canceled base claim. Accordingly, Applicant has amended claims 7–8 to depend from claim 1. As such, claims 7–8 are now in condition for allowance.

Applicant would also like to thank the Examiner for notice that claims 19 and 32 would be allowable if rewritten in independent form. Applicant has presently refrained from rewriting claims 19 and 32 in view of the discussion below. Applicant reserves the right to amend claims 19 and 32 into their originally allowable form at a later date if desired.

Rejection under 35 U.S.C. § 103

Claims 12, 14, 16–18, 20–21, and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over MacInnis et al. (U.S. Pat. No. 6,501,480) in view of Pfister et al. (The VolumePro Real-Time Ray-Casting System, Proceedings of the 26th Annual Confenerce on Computer Graphics and Interactive Techniques SIGGRAPH '99, July 1999).

As best understood by Applicant, MacInnis et al. disclose a graphics display system that processes analog video input, digital video input, and graphics input. The system incorporates a graphics accelerator that includes memory for graphics data. The accelerator preferably includes a coprocessor for performing vector type operations on a plurality of components of one pixel of the graphics data. The accelerator also includes an expanded instruction set for storing and loading data.

With regard to claim 12, MacInnis et al. fail to show, teach, or suggest, inter alia, wherein the blending circuit comprises a first mixing module and a second mixing module, wherein the first mixing module is operable to blend the at least one image layer to produce an intermediate blended image, and wherein the second mixing module is operable to blend the cursor image with the intermediate blended image.

The Examiner cites Fig. 2, Nos. 52 and 60 as disclosing a first mixing module and a second mixing module, wherein the blending circuit comprises a first mixing module and a second mixing module, wherein the first mixing module is operable to blend the at least one image layer to produce an intermediate blended image, and wherein the second mixing module is operable to blend the cursor image with the intermediate blended image. More specifically, the Examiner contends that the video scaler 52 of MacInnis et al. corresponds to the first mixing module and the video compositor 60 of MacInnis et al. corresponds to the second mixing module. However, the video scaler 52 does not blend the at least one image layer to produce an intermediate blended image as required by claim 12. Rather the video scaler 52 performs downscaling and upscaling of digital video and analog video as needed. For example, in the preferred embodiment, scale factors may be adjusted continuously from a scale factor of much less than one to a scale factor of four. (See col. 4, ll. 30–34.)

Pfister et al. fail to cure the deficient teachings of MacInnis et al. As best understood by Applicant, Pfister is directed to a single-chip real-time rendering system for consumer PCs. The rendering system implements object-space ray-casting with parallel slice-by-slice processing. The system includes hardware for gradient estimation, classification, and per-sample Phong illumination. The system does not perform any preprocessing and makes parameter adjustments and changes to the volume data visible without substantial delay.

Applicant can find no mention of wherein the blending circuit comprises a first mixing module and a second mixing module, wherein the first mixing module is operable to blend the at least one image layer to produce an intermediate blended image, and wherein the second mixing module is operable to blend the cursor image with the intermediate blended image in the cited portions of MacInnis et al. and Pfister et al. Therefore, reconsideration and withdrawal of the rejection of claim 12 is respectfully requested.

Claims 14, 16–21, and 23 each ultimately depend on claim 12 and are allowable for at least similar reasons. Claims 14, 16–21, and 23 are also believed to be allowable for having novel and nonobvious subject matter. Therefore, reconsideration and withdrawal of the rejection of claims 14, 16–21, and 23 are respectfully requested.

Rejection under 35 U.S.C. § 103

Claims 28–31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over MacInnis et al. (U.S. Pat. No. 6,501,480) in view of Pfister et al. (The VolumePro Real-Time Ray-Casting System, Proceedings of the 26th Annual Confenerce on Computer Graphics and Interactive Techniques SIGGRAPH '99, July 1999) and in further view of Hamburg (U.S. Pat. No. 6,028,583).

With regard to claim 28, as discussed supra, MacInnis et al. and Pfister et al. fail to show, teach, or suggest, a first blending module operable to blend the first and second image layers based on an alpha calculation using a specified alpha value to generate an intermediate blended image and a second blending module operable to blend the intermediate blended image with the third graphics image layer using alpha blending to produce an output image such that the graphics image layer has a foremost position in the output image.

Hamburg fails to cure the deficient teachings of MacInnis et al. and Pfister et al. As best understood by Applicant, Hamburg discloses a method of compositing image layers where a

compound layer contains a plurality of image layers. The compound layer has a compound layer effect. Any image layers under the compound layer are composited to generate a first intermediate image. The first intermediate image is composited with each image layer in the compound layer to generate a second intermediate image. The first intermediate image is composited with the second intermediate image according to the compound layer effect to generate a third intermediate image. The third intermediate image is composited with any remaining image layers to generate a final image.

Applicant can find no mention of, inter alia, a first blending module and second blending module in the cited portions of Hamburg. Therefore, reconsideration and withdrawal of the rejection of claim 28 are respectfully requested.

Claims 29–32 each ultimately depend from claim 28 and are allowable for at least similar reasons. Claims 29–32 are also believed to be allowable for having novel and nonobvious subject matter. Therefore, reconsideration and withdrawal of the rejection of claims 29–32 is respectfully requested.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is

respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (312) 609-7599.

Respectfully submitted,

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